



agtggtattt tatatataag tataaaaagt aataagactt taaaataagt taacggaata	60
caaaccctta atgcatttgt taaacattgt aaagtctaaa gcatggataa tgggcgagaa	120
gtaagtagat tgtaacacc ctgggtcaaa aattgatatt tagtaaaatt agttgcactt	180
tgtgcatttt ttgataagat gagtcatatg ttttaaattg tagtaatgaa aaacagtatt	240
atatcataat gaattggtat cttaataaaa gagatggagg taactt atg gat aac	295
Met Asp Asn	
1	
aat ccg aac atc aat gaa tgc att cct tat aat tgt tta agt aac cct	343
Asn Pro Asn Ile Asn Glu Cys Ile Pro Tyr Asn Cys Leu Ser Asn Pro	
5 10 15	
gaa gta gaa gta tta ggt gga gaa aga ata gaa act ggt tac acc cca	391
Glu Val Glu Val Leu Gly Gly Glu Arg Ile Glu Thr Gly Tyr Thr Pro	
20 25 30 35	
atc gat att tcc ttg tcg cta acg caa ttt ctt ttg agt gaa ttt gtt	439
Ile Asp Ile Ser Leu Ser Leu Thr Gln Phe Leu Leu Ser Glu Phe Val	
40 45 50	
ccc ggt gct gga ttt gtg tta gga cta gtt gat ata ata tgg gga att	487
Pro Gly Ala Gly Phe Val Leu Gly Leu Val Asp Ile Ile Trp Gly Ile	
55 60 65	
ttt ggt ccc tct caa tgg gac gca ttt ctt gta caa att gaa cag tta	535
Phe Gly Pro Ser Gln Trp Asp Ala Phe Leu Val Gln Ile Glu Gln Leu	
70 75 80	
att aac caa aga ata gaa gaa ttc gct agg aac caa gcc att tct aga	583
Ile Asn Gln Arg Ile Glu Glu Phe Ala Arg Asn Gln Ala Ile Ser Arg	
85 90 95	
tta gaa gga cta agc aat ctt tat caa att tac gca gaa tct ttt aga	631
Leu Glu Gly Leu Ser Asn Leu Tyr Gln Ile Tyr Ala Glu Ser Phe Arg	
100 105 110 115	
gag tgg gaa gca gat cct act aat cca gca tta aga gaa gag atg cgt	679
Glu Trp Glu Ala Asp Pro Thr Asn Pro Ala Leu Arg Glu Glu Met Arg	
120 125 130	
att caa ttc aat gac atg aac agt gcc ctt aca acc gct att cct ctt	727
Ile Gln Phe Asn Asp Met Asn Ser Ala Leu Thr Thr Ala Ile Pro Leu	
135 140 145	
ttt gca gtt caa aat tat caa gtt cct ctt tta tca gta tat gtt caa	775
Phe Ala Val Gln Asn Tyr Gln Val Pro Leu Leu Ser Val Tyr Val Gln	
150 155 160	

FIGURE 1-1

gct gca aat tta cat tta tca gtt ttg aga gat gtt tca gtg ttt gga Ala Ala Asn Leu His Leu Ser Val Leu Arg Asp Val Ser Val Phe Gly 165 170 175	823
caa agg tgg gga ttt gat gcc gcg act agc aat agt cgt tat aat gat Gln Arg Trp Gly Phe Asp Ala Ala Thr Ser Asn Ser Arg Tyr Asn Asp 180 185 190 195	871
tta act agg ctt att ggc aac tat aca gat tat gct gta cgc tgg tac Leu Thr Arg Leu Ile Gly Asn Tyr Thr Asp Tyr Ala Val Arg Trp Tyr 200 205 210	919
aat acg gga tta gaa cgt gta tgg gga ccg gat tct aga gat tgg gta Asn Thr Gly Leu Glu Arg Val Trp Gly Pro Asp Ser Arg Asp Trp Val 215 220 225	967
agg tat aat caa ttt aga aga gaa tta aca cta act gta tta gat atc Arg Tyr Asn Gln Phe Arg Arg Glu Leu Thr Leu Thr Val Leu Asp Ile 230 235 240	1015
gtt gct ctg ttc ccg aat tat gat agt aga aga tat cca att cga aca Val Ala Leu Phe Pro Asn Tyr Asp Ser Arg Arg Tyr Pro Ile Arg Thr 245 250 255	1063
gtt tcc caa tta aca aga gaa att tat aca aac cca gta tta gaa aat Val Ser Gln Leu Thr Arg Glu Ile Tyr Thr Asn Pro Val Leu Glu Asn 260 265 270 275	1111
ttt gat ggt agt ttt cga ggc tcg gct cag ggc ata gaa aga agt att Phe Asp Gly Ser Phe Arg Gly Ser Ala Gln Gly Ile Glu Arg Ser Ile 280 285 290	1159
agg agt tca cat ttg atg gat ata ctt aac agt ata acc atc tat acg Arg Ser Ser His Leu Met Asp Ile Leu Asn Ser Ile Thr Ile Tyr Thr 295 300 305	1207
gat gct cat agg ggt tat tat tat tgg tca ggg cat caa ata atg gct Asp Ala His Arg Gly Tyr Tyr Tyr Trp Ser Gly His Gln Ile Met Ala 310 315 320	1255
tct cct gta ggg ttt tcg ggg cca gaa ttc act ttt ccg cta tat gga Ser Pro Val Gly Phe Ser Gly Pro Glu Phe Thr Phe Pro Leu Tyr Gly 325 330 335	1303
act atg gga aat gca gct cca caa caa cgt att gtt gct caa cta ggt Thr Met Gly Asn Ala Ala Pro Gln Gln Arg Ile Val Ala Gln Leu Gly 340 345 350 355	1351
cag ggc gtg tat aga aca tta tcg tcc act tta tat aga aga cct ttt Gln Gly Val Tyr Arg Thr Leu Ser Ser Thr Leu Tyr Arg Arg Pro Phe 360 365 370	1399

FIGURE 1-2

aat ata ggg ata aat aat caa caa cta tct gtt ctt gac ggg aca gaa	1447
Asn Ile Gly Ile Asn Asn Gln Gln Leu Ser Val Leu Asp Gly Thr Glu	
375 380 385	
ttt gct tat gga acc tcc tca aat ttg cca tcc gct gta tac aga aaa	1495
Phe Ala Tyr Gly Thr Ser Ser Asn Leu Pro Ser Ala Val Tyr Arg Lys	
390 395 400	
agc gga acg gta gat tcg ctg gat gaa ata ccg cca cag aat aac aac	1543
Ser Gly Thr Val Asp Ser Leu Asp Glu Ile Pro Pro Gln Asn Asn Asn	
405 410 415	
gtg cca cct agg caa gga ttt agt cat cga tta agc cat gtt tca atg	1591
Val Pro Pro Arg Gln Gly Phe Ser His Arg Leu Ser His Val Ser Met	
420 425 430 435	
ttt cgt tca ggc ttt agt aat agt agt gta agt ata ata aga gct cct	1639
Phe Arg Ser Gly Phe Ser Asn Ser Ser Val Ser Ile Ile Arg Ala Pro	
440 445 450	
atg ttc tct tgg ata cat cgt agt gct gaa ttt aat aat ata att gca	1687
Met Phe Ser Trp Ile His Arg Ser Ala Glu Phe Asn Asn Ile Ile Ala	
455 460 465	
tcg gat agt att act caa atc cct gca gtg aag gga aac ttt ctt ttt	1735
Ser Asp Ser Ile Thr Gln Ile Pro Ala Val Lys Gly Asn Phe Leu Phe	
470 475 480	
aat ggt tct gta att tca gga cca gga ttt act ggt ggg gac tta gtt	1783
Asn Gly Ser Val Ile Ser Gly Pro Gly Phe Thr Gly Gly Asp Leu Val	
485 490 495	
aga tta aat agt agt gga aat aac att cag aat aga ggg tat att gaa	1831
Arg Leu Asn Ser Ser Gly Asn Asn Ile Gln Asn Arg Gly Tyr Ile Glu	
500 505 510 515	
gtt cca att cac ttc cca tcg aca tct acc aga tat cga gtt cgt gta	1879
Val Pro Ile His Phe Pro Ser Thr Ser Thr Arg Tyr Arg Val Arg Val	
520 525 530	
cgg tat gct tct gta acc ccg att cac ctc aac gtt aat tgg ggt aat	1927
Arg Tyr Ala Ser Val Thr Pro Ile His Leu Asn Val Asn Trp Gly Asn	
535 540 545	
tca tcc att ttt tcc aat aca gta cca gct aca gct acg tca tta gat	1975
Ser Ser Ile Phe Ser Asn Thr Val Pro Ala Thr Ala Thr Ser Leu Asp	
550 555 560	
aat cta caa tca agt gat ttt ggt tat ttt gaa agt gcc aat gct ttt	2023
Asn Leu Gln Ser Ser Asp Phe Gly Tyr Phe Glu Ser Ala Asn Ala Phe	
565 570 575	

FIGURE 1-3

aca tct tca tta ggt aat ata gta ggt gtt aga aat ttt agt ggg act	2071
Thr Ser Ser Leu Gly Asn Ile Val Gly Val Arg Asn Phe Ser Gly Thr	
580 585 590 595	
gca gga gtg ata ata gac aga ttt gaa ttt att cca gtt act gca aca	2119
Ala Gly Val Ile Ile Asp Arg Phe Glu Phe Ile Pro Val Thr Ala Thr	
600 605 610	
ctc gag gct gaa tat aat ctg gaa aga gcg cag aag gcg gtg aat gcg	2167
Leu Glu Ala Glu Tyr Asn Leu Glu Arg Ala Gln Lys Ala Val Asn Ala	
615 620 625	
ctg ttt acg tct aca aac caa cta ggg cta aaa aca aat gta acg gat	2215
Leu Phe Thr Ser Thr Asn Gln Leu Gly Leu Lys Thr Asn Val Thr Asp	
630 635 640	
tat cat att gat caa gtg tcc aat tta gtt acg tat tta tcg gat gaa	2263
Tyr His Ile Asp Gln Val Ser Asn Leu Val Thr Tyr Leu Ser Asp Glu	
645 650 655	
ttt tgt ctg gat gaa aag cga gaa ttg tcc gag aaa gtc aaa cat gcg	2311
Phe Cys Leu Asp Glu Lys Arg Glu Leu Ser Glu Lys Val Lys His Ala	
660 665 670 675	
aag gca ctc agt gat gaa cgc aat tta ctc caa gat tca aat ttc aaa	2359
Lys Ala Leu Ser Asp Glu Arg Asn Leu Leu Gln Asp Ser Asn Phe Lys	
680 685 690	
gac att aat agg caa cca gaa cgt ggg tgg gcc gga agt aca ggg att	2407
Asp Ile Asn Arg Gln Pro Glu Arg Gly Trp Gly Gly Ser Thr Gly Ile	
695 700 705	
acc atc caa gga ggg gat gac gta ttt aaa gaa aat tac gtc aca cta	2455
Thr Ile Gln Gly Gly Asp Asp Val Phe Lys Glu Asn Tyr Val Thr Leu	
710 715 720	
tca ggt acc ttt gat gag tgc tat cca aca tat ttg tat caa aaa atc	2503
Ser Gly Thr Phe Asp Glu Cys Tyr Pro Thr Tyr Leu Tyr Gln Lys Ile	
725 730 735	
gat gaa tca aaa tta aaa gcc ttt acc cgt tat caa tta aga ggg tat	2551
Asp Glu Ser Lys Leu Lys Ala Phe Thr Arg Tyr Gln Leu Arg Gly Tyr	
740 745 750 755	
atc gaa gat agt caa gac tta gaa atc tat tta att cgc tac aat gca	2599
Ile Glu Asp Ser Gln Asp Leu Glu Ile Tyr Leu Ile Arg Tyr Asn Ala	
760 765 770	
aaa cat gaa aca gta aat gtg cca ggt acg ggt tcc tta tgg ccg ctt	2647
Lys His Glu Thr Val Asn Val Pro Gly Thr Gly Ser Leu Trp Pro Leu	
775 780 785	

FIGURE 1-4

tca gcc caa agt cca atc gga aag tgt gga cag ccg aat cga tgc gcg	2695
Ser Ala Gln Ser Pro Ile Gly Lys Cys Gly Glu Pro Asn Arg Cys Ala	
790 795 800	
cca cac ctt gaa tgg aat cct gac tta gat tgt tcg tgt agg gat gga	2743
Pro His Leu Glu Trp Asn Pro Asp Leu Asp Cys Ser Cys Arg Asp Gly	
805 810 815	
gaa aag tgt gcc cat cat tcg cat cat ttc tcc tta gac att gat gta	2791
Glu Lys Cys Ala His His Ser His His Phe Ser Leu Asp Ile Asp Val	
820 825 830 835	
gga tgt aca gac tta aat gag gac cta ggt gta tgg gtg atc ttt aag	2839
Gly Cys Thr Asp Leu Asn Glu Asp Leu Gly Val Trp Val Ile Phe Lys	
840 845 850	
att aag acg caa gat ggg cac gca aga cta ggg aat cta gag ttt ctc	2887
Ile Lys Thr Gln Asp Gly His Ala Arg Leu Gly Asn Leu Glu Phe Leu	
855 860 865	
gaa gag aaa cca tta gta gga gaa gcg cta gct cgt gtg aaa aga gcg	2935
Glu Glu Lys Pro Leu Val Gly Glu Ala Leu Ala Arg Val Lys Arg Ala	
870 875 880	
gag aaa aaa tgg aga gac aaa cgt gaa aaa ttg gaa tgg gaa aca aat	2983
Glu Lys Lys Trp Arg Asp Lys Arg Glu Lys Leu Glu Trp Glu Thr Asn	
885 890 895	
atc gtt tat aaa gag gca aaa gaa tct gta gat gct tta ttt gta aac	3031
Ile Val Tyr Lys Glu Ala Lys Glu Ser Val Asp Ala Leu Phe Val Asn	
900 905 910 915	
tct caa tat gat caa tta caa gcg gat acg aat att gcc atg att cat	3079
Ser Gln Tyr Asp Gln Leu Gln Ala Asp Thr Asn Ile Ala Met Ile His	
920 925 930	
gcg gca gat aaa cgt gtt cat agc att cga gaa gct t	3116
Ala Ala Asp Lys Arg Val His Ser Ile Arg Glu Ala	
935 940	

FIGURE 1-5